

likely to be lower in the future in virtually all locations. Consequently higher levels of MSAT are not expected from the Build Alternative compared to the No Build.

The additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools and businesses; therefore, under each alternative there may be localized areas where ambient concentrations of MSAT could be higher under certain Build Alternatives than the No-Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the proposed bypass sections that would be built. However, the magnitude and the duration of these potential increases, compared to the No-Build alternative, cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. In sum, when a new highway is constructed, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No-Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

Information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The EPA continually assesses human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, [www.epa.gov/ncea/iris/index.html](http://www.epa.gov/ncea/iris/index.html)). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's Interim Guidance Update on Mobile source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, <http://pubs.healtheffects.org/view.php?id=282>) or in the future as vehicle emissions substantially decrease (HEI, <http://pubs.healtheffects.org/view.php?id=306>).